

### **REMARKS**

Claims 33-40 were presented for examination and were pending in this application.

In an Office Action dated September 21, 2005, claims 33-40 were rejected. Applicant thanks Examiner for examination of the claims pending in this application and addresses Examiner's comments below.

Based on the above Amendment and the following Remarks, Applicant respectfully requests that Examiner reconsider all outstanding objections and rejections, and withdraw them.

### **Response to Rejection Under 35 USC 102(e)**

In the third paragraph of the Office Action, Examiner rejected pending claims 33-40 under 35 USC § 102(e) as allegedly being anticipated by U.S. Patent No. 6,393,480 B1 to Qin et al. ("Qin"). This rejection is respectfully traversed.

Amended claim 33 recites a method of predicting the performance of an application in a multi-hop network, the multi-hop network comprising a client and a server and having a network path, the method comprising:

determining, for each thread of the application, a set of application factors corresponding to a set of functions performed by the application, the application factors being independent of the network and of a network flow control protocol, the application factors comprising average packet size and average node send time;

...

Thus, claim 1 recites a method of predicting an application's performance in a multi-hop network based on, *inter alia*, a set of application factors corresponding to functions performed by the application, wherein the application factors include average packet size and average node send time. The application factors are independent of the network and of a network flow control protocol.

Qin discloses a "method... for application response time prediction [that] provides an estimate of application performance in a second network given performance characteristics of the application in a first network." (Qin, Abstract). The Qin invention "determines predicted response time by performing an analysis of the application's performance on a LAN (local area network), and by combining this information with particular characteristics of the WAN (wide area network) on which the application will be deployed." (Qin, Summary of the Invention). However, Qin fails to disclose determining, for each thread of the application, a set of application factors corresponding to a set of functions performed by the application, the application factors being independent of the network and of a network flow control protocol, the application factors comprising average packet size and average node send time.

In section 4 of the Office action, Examiner asserts that the application factor "average packet size" is disclosed by Qin at column 8, lines 46-54. This passage discloses (emphasis added):

... where  $b$  is the number of bytes of a turn and  $B$  is the number of total bytes transmitted by the application.

Furthermore, the propagation delay can be determined as the product of the bit-level latency, say  $l$ , and the number of turns, say  $T$ , so that...

Average packet size is an expected packet size, measured, e.g., in bits or bytes, and determined, e.g., by taking an average over a statistically significant number of packets. In contrast, the italicized term within this passage represent a total, rather than average, number of bytes transmitted. Furthermore, this total is not disclosed as a per-packet size. Thus, the cited passage cannot reasonably be construed to disclose an average packet size.

Examiner also asserts in section 4 of the Office action that the application factor "average node send time" is disclosed by Qin at column 4, lines 29-41. This passage discloses (emphasis added):

Graphical user interface (GUI) 601 accepts input from the user and provides output via a display screen, as described for example in the related application for "Visual Thread Diagram," or in a conventional manner as is known in the art. Capture, Monitor, Filter Application module 602 measures application characteristics (such as processing time at nodes), as described below. Protocol decode module 603 identifies the protocol of a product by identification of packet header bytes. Database 604 provides storage of application trace files in a conventional manner, for use with the present invention. Tools module 605 contains software tools for determining latency and bandwidth as is known in the art.

The claimed average node send time is an expected time that a node occupies in *sending* information. In contrast, the first underlined term within the above passage represents a time occupied by a node in *processing* information. These two functions are distinct from each other. Further, the second underlined term within the above passage represents characteristics of a communications channel that are *independent* of the source of the information carried by the channel, e.g., a sending node source. Thus, the cited passage cannot be construed to disclose average node send time, as is claimed by Applicant. Therefore, for at lease these reasons, the cited reference fails to disclose at least the first

element of claim 33 as asserted by the Examiner. Thus, Applicant respectfully submits that claim 33 is patentably distinguishable over the cited reference, and Applicant respectfully requests that Examiner reconsider the rejection and withdraw it.

Claims 35, 37 and 39 recite apparatuses and a computer readable medium having the same or similar elements; thus, Applicant requests that Examiner withdraw the rejections of these claims as well.


Claim 34 depends from claim 33 and recites additional patentable features, for example, generating a histogram of node send time and determining the number of turns added per direction based on the histogram. These features, taken in the context of the features recited in Claim 33, are distinguishable over the cited reference. Therefore, Applicant respectfully submits that claim 34 is also patentably distinguishable over the cited reference, and Applicant requests that Examiner reconsider the rejection and withdraw it. Claims 36, 38 and 40 similarly depend from independent claims 35, 37 and 39, which were discussed above. Applicant therefore respectfully requests that Examiner withdraw the rejections of claims 36, 38 and 40 as well.

### **Conclusion**

In summary, Applicant respectfully submits that claims 33-40 are patentably distinguishable over Qin. Applicant further submits that claims 33-40 are patentably distinguishable over the cited references (including references cited, but not applied). Accordingly, Applicant requests that this application be passed to issue.

Applicant respectfully invites Examiner to contact Applicant's representative at the number provided below if Examiner believes it will help expedite furtherance of this application.

Respectfully Submitted,  
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